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January 9, 2008

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VIA ELECTRONIC FILING
HAND DELIVERED ORIGINALS

Mr. Charles Terreni, Chief Clerk of the Commission
Public Service Commission of South Carolina
Synergy Business Park, Saluda Building
101 Executive Center Drive
Columbia, South Carolina 29210

**Re: Application of Duke Energy Carolinas, LLC
for approval of Energy Efficiency Plan
Docket No. 2007-358-E**

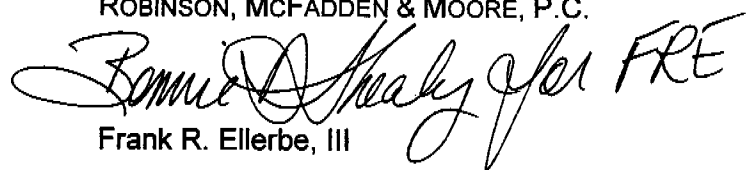
Dear Mr. Terreni:

Enclosed for filing please find Supplemental Exhibits 1 and 2 to Duke Energy Carolinas' Response to Southern Environmental Law Center's Interrogatories and Request for Production and Motion for Confidential Treatment of Selected Responses. These supplemental exhibits are the official versions of testimony of Ed Ernest and the testimony of Barbara G. Yarbrough received from the Department of Archives. The Exhibits should be filed with both the "Public" version and the "Confidential" version of the Responses filed yesterday.

An original and two copies of each are included for filing. Please date-stamp the extra copies as proof of filing and return them with our courier. If you have any questions, please have someone on your staff contact me.

Yours truly,

ROBINSON, MCFADDEN & MOORE, P.C.


Frank R. Ellerbe, III

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STATE OF SOUTH CAROLINA

Application of

Duke Energy Carolinas, LLC
for Approval of Energy Efficiency Plan Including
an Energy Efficiency Rider and Portfolio of Energy
Efficiency Programs.

BEFORE THE
 PUBLIC SERVICE COMMISSION
 OF SOUTH CAROLINA

COVER SHEET

DOCKET
 NUMBER: 2007-358-E

(Please type or print)

Submitted by: Bonnie D. ShealySC Bar Number: 11125

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DOCKETING INFORMATION (Check all that apply)

- ☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously
- ☒ Other: _____

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)			
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request	
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certification	
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation	
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement	
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment	
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter	
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response	
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input checked="" type="checkbox"/> Response to Discovery	
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition	
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation	
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena	
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff	
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input type="checkbox"/> Other:	
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest		
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit		
	<input checked="" type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report		

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2007-358-E

January 8, 2008

In re:

Application of Duke Energy Carolinas, LLC
For Approval of Energy Efficiency Plan
Including an Energy Efficiency Rider and
Portfolio of Energy Efficiency Programs

)
) **DUKE ENERGY CAROLINAS'**
) **RESPONSES TO SOUTHERN**
) **ENVIRONMENTAL LAW CENTER**
) **INTERROGATORIES AND**
) **REQUESTS FOR PRODUCTION**
) **AND MOTION FOR**
) **CONFIDENTIAL TREATMENT**
) **OF SELECTED RESPONSES**

SUPPLEMENTAL EXHIBIT 1

TESTIMONY OF H. ED ERNST, JR.
FOR DUKE POWER CO.
DOCKET NO. 92-208-E

This document is an exact duplicate, with the exception of the form of the signature, of the e-filed copy submitted to the Commission in accordance with its electronic filing instructions

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**TESTIMONY
OF
H. ED ERNST, JR.
FOR
DUKE POWER COMPANY**

**Docket No. 92-208-E
Before The Public Service Commission of South Carolina**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION
WITH DUKE POWER COMPANY.**

A. My name is H. Ed Ernst, Jr. My business address is 526 South Church Street, Charlotte, North Carolina. I am Manager, Energy Products Planning for Duke Power Company. My responsibilities include the planning and economic analysis for the Company's demand-side programs, as well as economic analysis, budget, and administrative support for the Company's marketing and sales activities.

**Q. PLEASE SUMMARIZE BRIEFLY YOUR EDUCATIONAL BACKGROUND AND
BUSINESS EXPERIENCE.**

A. I received a Bachelor of Science degree in Electrical Engineering in 1975 from North Carolina State University, a Master of Engineering in Electric Power Engineering from Rensselaer Polytechnic Institute in 1976, and a Master of Business Administration from the University of North Carolina at Charlotte in 1981. In June, 1976, I was employed by Duke in the Operating Department as an Operating Engineer. Following my employment, I progressed through a number of assignments which included software development, employee training, and engineering support for the daily operations of Duke's bulk generation and transmission facilities. In 1989, I became Manager of Transmission

1 Planning in the System Planning Department. In 1990, I was named Manager of Power
2 Supply with the responsibility for the daily operations of Duke's bulk generation and
3 transmission facilities. I was named Manager, Demand-Side Planning in 1991 and
4 Manager of Energy Products Planning in 1992. I have served as an industry advisor on
5 both the Electric Power Research Institute (EPRI) Power System Planning and Operation
6 Task Force and Demand-Side Management Task Force. I am a registered Professional
7 Engineer in the states of North Carolina and South Carolina.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to describe Duke's Integrated Resource Planning (IRP)
10 process and to demonstrate how Duke's IRP process results in a cost-effective mix of
11 resources to meet customers' electricity needs. I will also describe Duke's Air
12 Conditioning Load Control Program (A/C Load Control) and how the Air Conditioning
13 Load Control Program was analyzed in Duke's IRP process. Finally, I will explain how
14 the IRP analysis showed that the Air Conditioning Load Control would be too costly to
15 continue at the current credit level. This Commission has set forth the requirements for
16 utilities to perform integrated resource planning and has established the objective for the
17 process and "the development of a plan that results in the minimization of long run total
18 costs of the utility's system and produces the least cost for the customer . . ." The need
19 to modify the Air Conditioning Load Control credits to benefit all customers is a result
20 of Duke's IRP process. Therefore, it is important for the Commission to allow Duke to
21 modify the credits in order to be consistent with integrated resource planning
22 requirements.

1 Q. PLEASE BRIEFLY DESCRIBE THE INTEGRATED RESOURCE PLANNING
2 PROCESS AT DUKE POWER COMPANY AND YOUR ROLE IN THE IRP
3 PROCESS.

4 A. Integrated Resource Planning is the process of integrating demand-side management
5 (DSM), supply-side, and purchased power resource options to provide the best resource
6 plan to meet the Company's electric demand and energy requirements with consideration
7 of uncertainties which may impact these requirements. My role in the IRP process is to
8 develop and analyze the DSM options to be considered for inclusion in the IRP process.

9 Q. PLEASE DESCRIBE THE INTEGRATION PROCESS.

10 A. Following the annual development of long range forecast of customer needs for
11 electricity, the integration process begins with a base supply-side plan which is the lowest
12 total cost mix of supply-side resources which meets the projected energy and capacity
13 needs including a 20% minimum planning reserve margin. Lowest total cost is measured
14 by minimization of present worth of revenue requirements over the planning horizon. The
15 20% minimum planning reserve margin has been deemed an appropriate planning
16 consideration by this Commission.

17 Q. PLEASE DESCRIBE HOW DEMAND-SIDE PLANNING RESOURCES ARE
18 CONSIDERED?

19 A. Once a base supply-side plan has been established, demand-side options are examined
20 which may alter this base plan. Demand-side options are identified through customer
21 research to identify customer needs. Each demand-side option is then analyzed using the
22 Commission-approved economic analysis tests. For each option, a benefit/cost ratio is
23 determined by examining benefits and costs of the option through the program life.

1 Based on the results of this benefit/cost analysis, programs are either included in or
2 excluded from Duke's preliminary plan.

3 **Q. IS THE INTEGRATION PROCESS COMPLETE ONCE THE PRELIMINARY**
4 **PLAN IS COMPLETED?**

5 A. No. The preliminary plan is then subjected to a risk assessment process which analyzes
6 potential changes to the plan results caused by an uncertain future. Examples of
7 uncertainties which Duke considers include changes in capacity factors of existing
8 generating units, changes in forecasted load growth, changes in capital costs of new
9 generating units, changes in fuel costs, and new environmental regulations. Duke may
10 use the risk assessment results to initiate contingency planning for demand-side, supply-
11 side or purchased power resources. The integrated resource plan is then complete and is
12 filed with the Commission in the form of an Integrated Resource Plan or Short-Term
13 Action Plan. From this plan, Duke implements the resource options necessary to
14 implement the plan. These options may include supply-side, purchased, or demand-side
15 resources.

16 **Q. PLEASE DESCRIBE THE TYPES OF DEMAND-SIDE MANAGEMENT**
17 **PROGRAMS DUKE UTILIZES.**

18 A. There are four categories of programs:

- 19 1) Energy Efficiency: Options that reduce customer operating costs and Duke's
20 system demand and energy needs. An example is a program which promotes high
21 efficiency air conditioning equipment.
- 22 2) Interruptible: Options that reduce Duke's system peak demand by interrupting
23 all or part of participating customers' electrical service. An example is Duke's

1 Air Conditioning Load Control Program.

2 3) Load Shifting: Options that reduce Duke's system peak demand by shifting
3 energy use to off-peak times. An example is Duke's Cool Storage Pilot Program.

4 4) Strategic Sales: Options that encourage the installation of efficient electric
5 technologies which provide a direct benefit to customers and provide additional
6 revenue to the utility. An example is Duke's Food Service Program.

7 **Q. PLEASE EXPLAIN THE POSITIVE EFFECTS OF DUKE'S DEMAND-SIDE**
8 **PROGRAMS ON CUSTOMERS AND THE UTILITY.**

9 A. Demand-side programs benefit Duke and its customers. These programs benefit
10 customers by either providing participating customers with ways to lower their electric
11 bills or helping customers meet energy needs when customers use efficient electric
12 technologies. Duke seeks to offer a range of programs to meet the varying needs of its
13 customers. The demand-side programs benefit the utility by deferring the need for new
14 generation or by providing increased revenues. Each of the four types of programs is
15 important in meeting customer electric needs in a low cost manner.

16 **Q. PLEASE PROVIDE ADDITIONAL INFORMATION ON THE BENEFITS**
17 **OF DUKE'S INTERRUPTIBLE PROGRAMS.**

18 A. Interruptible demand-side programs such as Interruptible Service or Air Conditioning
19 Load Control provide bill credits to customers to interrupt their use of electricity at any
20 time the Company has capacity problems. The bill credits reduce participating
21 customers' electric bills. Interruptible programs reduce load at a cost lower than the cost
22 to build new generating capacity. In other words, the bill credits plus the cost to
23 administer the program are lower in cost than building a new combustion turbine unit.

1 Therefore, these programs defer the need for new supply-side resources. This resource
2 deferral results in lower utility costs.

3 **Q. ARE DEMAND-SIDE PROGRAMS FORMALLY EVALUATED FOR COST-**
4 **EFFECTIVENESS BY DUKE?**

5 A. Yes. Duke uses economic test to evaluate demand-side programs. These tests are
6 standard tests used by the electric utility industry and have been subject to review by this
7 Commission.

8 **Q. PLEASE NAME AND DESCRIBE THE ECONOMIC TESTS WHICH ARE**
9 **APPLIED TO THE INTERRUPTIBLE OPTIONS.**

10 A. The Total Resource Cost (TRC) test measures the net costs of demand-side options as
11 resources based on the option's total cost, which includes participants' costs and utility's
12 costs. The Utility Cost Test (UCT) measures net costs of demand-side options as
13 resources based on the company's costs, including incentive payments. The Rate Impact
14 Measure (RIM) test measures the effect of demand-side options on utility rates by
15 analyzing the changes in utility revenues and operating costs. For interruptible options,
16 the Company looks at the avoided cost of capacity and energy due to these programs
17 versus the costs of these programs. Specifically, the Company uses the RIM, TRC and
18 UCT tests to determine the cost-effectiveness of these options.

19 **Q. WHAT IS THE PURPOSE OF THE AIR CONDITIONING LOAD CONTROL**
20 **PROGRAM AND HOW DOES IT FIT INTO DUKE'S OVERALL MIX OF DSM**
21 **PROGRAMS?**

22 A. The Residential Air Conditioning Load Program offers residential customers a monthly
23 bill credit for the four summer billing months of July through October. In exchange for

1 the credit, participants allow Duke Power to interrupt service to their central air
2 conditioning (cooling) systems any time the company has capacity problems. The
3 program allows Duke to reduce peak demand during capacity problem situations and
4 reduce the need for future generation. The Air Conditioning Load Control Program helps
5 Duke to manage the amount of peaking generation resources it needs to meet customers'
6 needs in a reliable and cost-effective manner.

7 **Q. PLEASE SUMMARIZE DUKE'S ANALYSIS OF THE AIR CONDITIONING**
8 **LOAD CONTROL PROGRAM.**

9 A. The assumptions and input data used to model the program in Duke's IRP process are
10 contained in the standard DSM program filing information as an attachment to Duke's
11 March 9, 1994 letter requesting approval to modify the AC Load Control credits.

12 Currently, customers participating in the Residential Air Conditioning Load
13 Control Program receive a monthly bill credit of \$3.25 per KW of full load nameplate
14 compressor capacity for the four summer billing months of July through October. The
15 average credit is \$15.80 per month for the four summer billing months. Based on 1992
16 Program Evaluation results, Duke determined that the Residential Air Conditioning Load
17 Control Program requires modification. The cost of the program (bill credits, program
18 administration, equipment costs, etc.) outweighs the long-term benefits of avoided
19 capacity and energy this program provides. The primary factor affecting program cost
20 effectiveness is the level of credit paid compared to the benefit received. As a result,
21 Duke redesigned the Residential Load Control Program and developed a credit structure
22 that was comparable to the benefit received.

As a result of Duke's program redesign, the credit structure was revised to pay a flat credit of \$8 per month per home for the four billing months of July, August, September, and October. Duke proposed to implement the revised credit effective January 1, 1995 for all current program participants and June 1, 1994 for all new customer additions. The credit was based on the current program costs and the resulting production cost and deferred capacity costs savings as a result of the program. Also, Duke compared the current level of credit paid by other utilities for similar programs and conducted research with residential customers to test various cost-effective credit levels and formats. Based on the proposed credit revisions, the expected benefit/costs ratios are as follows:

	<u>RIM TEST</u>	<u>UTILITY TEST</u>	<u>TRC TEST</u>
EXISTING CUSTOMERS	1.44	1.44	3.44
INCREMENTAL ADDITIONS	1.06	1.06	1.58
TOTAL PROGRAM	1.27	1.27	2.42

Q. WHAT HAS CHANGED THAT IS NOW CAUSING DUKE TO PROPOSE TO LOWER THE CREDIT?

A. The current credit levels were established in 1981. Since that time several things have happened which are now resulting in a need to lower the credit.

- 1) More efficient equipment being installed today means that the average air-conditioning unit provides a lower kilowatt demand reduction and, therefore, less benefit to Duke than in 1981.
- 2) The Company has developed a better understanding of the actual benefits that load control provides in terms of reduced need for peaking capacity.

1 3) Costs for generating capacity, such as combustion turbines, are decreasing and, to
2 be cost-effective, A/C load control credits must also decrease.

3 **Q. WHAT ARE THE BENEFIT/COST RATIOS IF THE CREDIT IS NOT MODIFIED**
4 **FOR EXISTING CUSTOMERS?**

5 A. The impact of such a proposal based on current data would reduce the benefit/cost ratio
6 to 0.92 for RIM and UCT as opposed to the 1.27 as filed in March 1994. Therefore, the
7 program is not cost-effective at the current level.

8 **Q. WHEN YOU SAY THE PROGRAM IS NOT COST-EFFECTIVE AT THE**
9 **CURRENT LEVEL, WHAT DO YOU MEAN? COST-EFFECTIVE FOR WHOM?**

10 A. If we continue to pay the current level of credits the program will ultimately result in
11 higher rates for all of Duke's customers. Remember that the purpose of interruptible
12 programs is to act as a substitute for peaking generation. A number of participating
13 customers have complained about Duke's proposal to lower the A/C credits.
14 Understandably, their motivation is their personal power bill. Duke must look at
15 customers as a whole and make decisions based on what is best for all customers.
16 Lowering A/C load control credits is in the best interest of all customers, even though it
17 will lower the credit received by many participating customers. At the reduced level of
18 credits, all customers (participants and non-participants) will eventually pay less per kwh
19 of electricity than they would without the program.

20 **Q. WHAT ARE DUKE'S CONCERNS IF THIS COMMISSION DOES NOT**
21 **ALLOW DUKE TO LOWER THE A/C LOAD CONTROL CREDITS?**

22 A. Duke believes that if it is not allowed to make the Air Conditioning Load Control
23 program cost-effective by modifying the credits, the purpose of the IRP process will be

1 undermined. The objective of integrated resource planning as set forth by this
2 Commission is "the development of a plan that results in the minimization of the long
3 run total costs of the utility's overall system and produces the least cost to the consumer
4" The process involves use of demand-side management programs to minimize
5 system costs and costs to customers as a whole. The process also involves continuous
6 examination of Duke's DSM programs to ensure the programs remain cost-effective. The
7 request to change the A/C load control credits is a classic example of the IRP process at
8 work. Duke offers A/C load control as part of its IRP process. The DSM program
9 evaluation of the program indicated a need to modify the program to ensure future cost-
10 effectiveness. If Duke is not allowed to modify DSM programs to make them cost-
11 effective, the question must be asked why expend thousands of dollars to evaluate the
12 programs.

13 **Q. WHY IS DUKE PROPOSING A FLAT CREDIT AS OPPOSED TO A CREDIT**
14 **TIED TO EQUIPMENT SIZE AS IS CURRENTLY OFFERED?**

15 A. Ms. Yarbrough's testimony explains the administrative advantages of a flat credit. I will
16 explain the technical basis for the \$8 flat credit. The \$8 flat credit is based on typical air
17 conditioning unit sizes and operating conditions across the Duke system. If each
18 participant was analyzed independently, each participant's contribution would be different.
19 This is primarily due to lifestyle, thermostat settings, compressor sizes and equipment
20 cycling. Offering credits based on each customer's specific contribution to the program
21 would require detailed analysis of each customer which would add to the cost of the
22 program. The most economical solution is to develop an average profile potential for all
23 program participants and provide a single credit equal to the average condition.

1 Q. WHAT IS ANNUAL COST IF DUKE IS NOT ALLOWED TO LOWER THE
2 CREDIT?

3 A. Duke would expend an additional \$1,700,000 per year in credits based on 56,000
4 customers in South Carolina.

5 Q. WHAT IS DUKE ASKING THIS COMMISSION TO DO?

6 A. Duke is requesting that the Commission approve the changes in A/C Load Control
7 Program as filed in Duke's March 9, 1994 filing in Docket Nos. 92-208-E and 79-166-E
8 which requested approval of the changes to the Air Conditioning Load Control credit,
9 and revise the credit level for all customers to \$8 per month effective with the summer
10 1995 billings.

11 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

12 A. Yes.

REPRODUCED FROM DOCUMENT IN
SOUTH CAROLINA DEPARTMENT OF ARCHIVES AND HISTORY
COLUMBIA, S. C.

S.C. Public Service Commission

Hearing Reporters' Files

Hearing No. 9257

Docket No. 92-208-E

**BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2007-358-E**

January 8, 2008

In re:)	
)	DUKE ENERGY CAROLINAS'
)	RESPONSES TO SOUTHERN
Application of Duke Energy Carolinas, LLC)	ENVIRONMENTAL LAW CENTER
For Approval of Energy Efficiency Plan)	INTERROGATORIES AND
Including an Energy Efficiency Rider and)	REQUESTS FOR PRODUCTION
Portfolio of Energy Efficiency Programs)	AND MOTION FOR
)	CONFIDENTIAL TREATMENT
)	OF SELECTED RESPONSES

SUPPLEMENTAL EXHIBIT 2

**TESTIMONY OF BARBARA G. YARBROUGH
FOR DUKE POWER CO.
DOCKET NO. 92-208-E**

This document is an exact duplicate, with the exception of the form of the signature, of the e-filed copy submitted to the Commission in accordance with its electronic filing instructions

1 TESTIMONY OF
2 BARBARA G. YARBROUGH
3 FOR
4 DUKE POWER COMPANY
5 SCPSC DOCKET NO. 92-208-E

6 Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH DUKE POWER
7 COMPANY.

8 A. My name is Barbara G. Yarbrough and my business address is 526 S.
9 Church Street, Charlotte, North Carolina. I am Manager, Rate
10 Administration for Duke Power Company.

11 Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES IN THIS POSITION.

12 A. I am responsible for directing the proper administration of Duke's
13 rate schedules and service regulations, and the Public Service
14 Commission's rules and regulations. Additionally, I am
15 responsible for the investigation of customer complaints received
16 through the Commission.

17 Q. HOW LONG HAVE YOU PERFORMED THESE DUTIES?

18 A. I have worked in Rate Administration for the last 15 years, the
19 last four and a half years as Manager.

20 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

21 A. The purpose of my testimony is to describe the provisions of
22 Duke's air conditioning load control program.

23 Q. PLEASE DESCRIBE WHEN AND HOW DUKE IMPLEMENTED ITS LOAD CONTROL
24 PROGRAM.

25 A. In May 1979, Duke filed a proposal to add load control provisions
26 to its standard residential rate schedules. These provisions
27 allowed customers the option of having their electric water
28 heaters and/or air conditioners interrupted at times when the
29 Company experienced capacity problems. In exchange Duke would

1 give billing credits to customers. Participating customers
2 received \$2.00 per month per kilowatt of air conditioning each
3 month for the four summer billing months of July - October. In
4 order to establish the KW demand used to calculate the credit,
5 Duke uses the compressor capacity listed on the air conditioner's
6 nameplate. Credits were limited to 20% of the total bill
7 exclusive of such credits. The Commission approved the load
8 control provisions on Duke's residential rate schedules R, RW, RA
9 and RC effective June 5, 1979. In 1981, the load control
10 provisions were removed from the individual schedules and
11 established as a separate Rider LC.

12 Q. HOW DID DUKE OPERATE LOAD CONTROL TO INTERRUPT SERVICE TO THE AIR
13 CONDITIONING?

14 A. Duke installed power line carrier equipment in substations which
15 would send a signal across the power line to a load control device
16 installed on the customer's water heater or air conditioner. The
17 signal would cause an interruption of service to the controlled
18 equipment. When the capacity problem was over, another signal
19 would restore service to the controlled equipment. Currently Duke
20 uses a combination of the power line carrier system and a radio
21 control system.

22 Q. WHAT DID THE CUSTOMER HAVE TO DO TO PARTICIPATE IN THE LOAD
23 CONTROL PROGRAM?

24 A. In order to control equipment, an electrician had to install
25 wiring and a meter enclosure in the customer's air conditioner
26 circuit to house a load control device. Customers had the option

1 of having this wiring performed themselves or having Duke contract
2 with an electrician to do the work for an installation fee stated
3 in the rate.

4 Q. WERE CHANGES SUBSEQUENTLY MADE TO THE PROGRAM?

5 A. Yes. During the first year of the program Duke gained experience
6 with load control and recognized a need to make significant
7 changes to the program. In 1981, Duke proposed changes in the
8 amount of the credits and the installation fee. The Commission
9 approved the changes effective November 5, 1981. Duke's
10 experience during the first few years of the program showed that
11 the installation fee needed to be restructured and increased. As
12 a result the fee was increased to \$35 for installation of the
13 wiring for control of either water heating or air conditioning and
14 increased to \$50 for the installation of wiring for customers who
15 had water heating and air conditioning load control, provided the
16 installation could be done at the same time. Based on the
17 estimated value of the program to Duke at that time, the air
18 conditioning credit was increased to \$3.25 per kilowatt. In
19 addition, the limitation on the maximum credit was raised to 35%
20 of the customer's bill.

21 Q. IS THERE A CONTRACT PERIOD FOR LOAD CONTROL SERVICE?

22 A. Duke offers customers a contract for a period of two years, but
23 the customer can discontinue the service after the first year
24 without penalty. A copy of the current contract is attached as
25 Exhibit 1. Previous contracts had similar contract terms. Duke
26 chose the two years to help ensure that contracting customers

1 receive enough credits in the two years to more than offset their
2 investment for the installation of the load control device(s).

3 Q. DOES DUKE'S CONTRACT WITH LOAD CONTROL CUSTOMERS ALLOW CHANGES IN
4 THE CREDITS FOR AIR CONDITIONING LOAD CONTROL?

5 A. Yes. First, the contract's term is for two years. Within the
6 terms of the contract the customer may terminate after the first
7 year has passed, or Duke may terminate the agreement after two
8 years. Second, each contract states that the provisions of the
9 load control program may be modified from time to time. This
10 language allows modification, upon Commission approval, of any
11 terms and conditions. Such language is fairly standard in
12 contracts for utility service recognizing that changes in rates,
13 terms and conditions, must keep pace with costs and other factors
14 as long as the rate is available. However, Duke has not elected
15 to request a credit charge for customers who are currently within
16 the first two years of their contract and who entered into that
17 contract prior to Commission approval to lower the credit for new
18 installations.

19 Q. DOES DUKE'S PROPOSAL INVOLVE DISCONTINUING AIR CONDITIONING LOAD
20 CONTROL SERVICE FOR EXISTING CUSTOMERS?

21 A. No. Air conditioning load control remains an important resource
22 for Duke, however, not at the level of credits Duke is currently
23 paying. Duke's plan for implementing the proposed change in
24 credits provides that all contracting customers receive a minimum
25 of two years of credits at the \$3.25 per KW level, even though a
26 large number of customers within their initial term would have

1 recouped their investment in one year or less. Secondly, it is
2 Duke's intent to continue to offer load control service at a lower
3 credit to the modified customers whose initial contract has
4 expired. The Commission has already approved Duke's proposal to
5 pay \$8.00 per month for load control to new customers applying for
6 this service after September 12, 1994.

7 Q. HOW MANY CUSTOMERS CURRENTLY PARTICIPATE IN THE AIR CONDITIONING
8 LOAD CONTROL PROGRAM?

9 A. A little over 56,000, about 15% of Duke's residential customers in
10 South Carolina.

11 Q. WHY IS DUKE PROPOSING A FLAT CREDIT?

12 A. The flat credit is easier to explain to customers, many of whom do
13 not understand the terms kilowatt and capacity. The \$8 credit is
14 clearer to a nonparticipating customer inquiring about entering
15 the program. A flat credit is also clearer to participating
16 customers who currently are confused when their credit is
17 different than their neighbors' credit. Also, the flat credit is
18 less expensive for Duke to administer. The current credit based
19 on a KW value requires a field visit to verify the size and KW of
20 the air conditioning unit. A flat credit would eliminate these
21 costs and administrative problems.

22 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

23 A. Yes.

REPRODUCED FROM DOCUMENT IN
SOUTH CAROLINA DEPARTMENT OF ARCHIVES AND HISTORY
COLUMBIA, S. C.

S.C. Public Service Commission

Hearing Reporters' Files

Hearing No. 9257

Docket No. 92-208-E

BEFORE THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA
DOCKET NO. 2007-358-E

In Re:

)
)
Application of Duke Energy)
Carolinas, LLC for Approval of)
Energy Efficiency Plan Including an)
Energy Efficiency Rider and)
Portfolio of Energy Efficiency)
Programs)

CERTIFICATE OF SERVICE

This is to certify that I, Leslie L. Allen, a legal assistant with the law firm of Robinson, McFadden & Moore, P.C., have this day caused to be served upon the person(s) named below the **Duke Energy Carolinas, LLC's Supplemental Exhibits 1 and 2 to Responses to Southern Environmental Law Center Interrogatories and Requests for Production and Motion for Confidential Treatment of Selected Responses** in the foregoing matter by placing a copy of same in the United States Mail, postage prepaid, in an envelope addressed as follows:

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Dated at Columbia, South Carolina this 9th day of January, 2008.



Leslie L. Allen